

Meet the newest member of the process sealed G3T Series – a surface mount toggle with a customized feature – and available as a standard product! This switch has all the same benefits and characteristics as other G3T Series models, plus a heat resistant sticker that enables compatibility with SMT component placement systems, or pick-and-place machines. Every switch in the tape-reel packaging has the thermal sticker prefitted and applied, set to begin your process with speed and precision. Resources are conserved by utilizing a standard part number, reducing lead time and cost.



G3T13AH-R-251A

General Specifications

Electrical Capacity (Resistive Load)

Logic Level: 0.4VA maximum @ 28V AC/DC maximum
(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)

Other Ratings

Contact Resistance:	80 milliohms maximum
Insulation Resistance:	500 megohms minimum @ 500V DC
Dielectric Strength:	500V AC minimum for 1 minute minimum
Mechanical Life:	50,000 operations minimum
Electrical Life:	50,000 operations minimum
Nominal Operating Force:	1.7N (maintained)
Angle of Throw:	28°

Materials & Finishes

Actuator:	Polyphenylene sulfide (UL94V-0)
Case:	Polyphenylene sulfide (UL94V-0)
Sealing Rings:	Nitrile butadiene rubber
Movable Contacts:	Phosphor bronze with gold plating
Stationary Contacts:	Phosphor bronze with gold plating
Base:	Polyphenylene sulfide (UL94V-0)
Terminals:	Phosphor bronze with gold plating

Environmental Data

Operating Temperature Range:	-30°C through +85°C (-22°F through +185°F)
Humidity:	90 ~ 95% humidity for 96 hours @ 40°C (104°F)
Vibration:	10 ~ 500Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours
Shock:	50G (490m/s ²) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Processing

Soldering:	Reflow Soldering recommended. Preheat temperature: 150°C ~ 170°C @ 90 seconds; Heating temperature: 200°C @ 30 seconds; Peak temperature: 240°C; Cycles: 2
Cleaning:	Manual Soldering: 390°C @ 4 seconds on terminal; Cycles: 2 Automated cleaning. See Cleaning Specifications in Supplement section of NKK Switch Guide.

Standards & Certifications

Flammability Standard:

UL94V-0 actuator, case & base

The G3T Series toggles have not been tested for UL recognition or CSA certification. These switches are designed for use in a low-voltage, low-current, logic-level circuit. When used as intended in a logic-level circuit, the results do not produce hazardous energy.

Distinctive Characteristics

Flat surface of heat resistant sticker adhered to top of switch and tape-reel packaging facilitate compatibility with pick-and-place SMT component placement systems.

Ultra-miniature size allows high density mounting, and extremely light weight of 0.6 gram makes these switches ideal for handheld equipment.

Tape-reel packaging, which meets the EIA-481-D Standard, allows rapid automated placement of surface mount devices.

Heat resistant resin used for housing, base, and lever allows vapor phase and infrared convection reflow soldering.

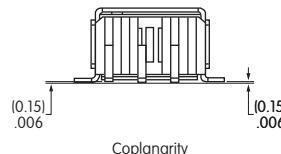
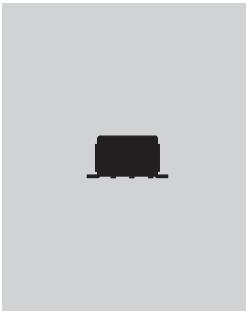
Combination of design features achieves total seal and allows automated processing techniques, including flux cleaning procedures: one-piece bushing and housing, rubber seals surrounding actuator and base, epoxy at joint of case and base, and molded-in, epoxy-sealed terminals.

Innovatively designed STC contact mechanism with benefits unavailable in conventional mechanisms: smoother, positive detent actuation, increased contact stability and unparalleled logic-level reliability.

Gull-wing terminals provide mechanical stability during soldering and simplified solder joint inspection.

Coplanarity: all considered surfaces must lie between two parallel planes that are a maximum distance apart of .0059" (0.15mm).

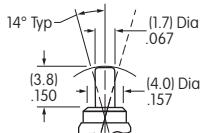
Actual Size



		POLE & CIRCUIT			Throw & Schematics		
Pole	Model	Toggle Position	Connected Terminals				
SP	G3T13	ON 	OFF 	ON 	Up 	Center 	Down 
							Note: Terminal numbers are not actually on switch.

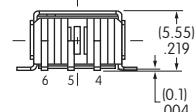
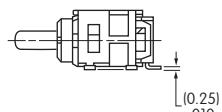
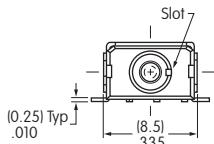
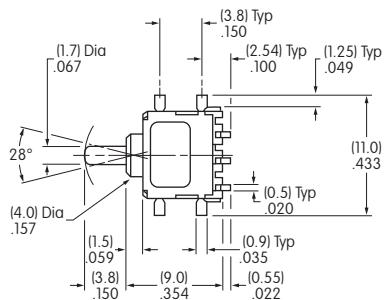
ACTUATOR

.150" (3.8mm) Column Toggle



TYPICAL SWITCH DIMENSIONS

Right Angle Mounting

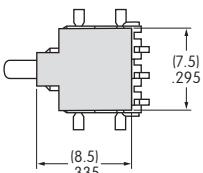


Switch without Sticker



G3T13AH

Heat Resistant Sticker on Switch

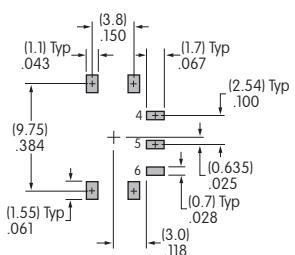


Switch with Sticker



G3T13AH-R-251A

Pad Layout



PACKAGING

Tape-Reel for Right Angle

500 pieces per reel

Switches must be ordered in 500-piece increments with tape-reel packaging.

This packaging meets EIA-481-D Standard for "16mm and 24mm Embossed Carrier Taping of Surface Mount Components for Automatic Handling."

Note: Possible deformation of the Tape-Reel may occur when environmental temperature exceeds 50°C (122°F). It is recommended to store the product on a flat surface within normal temperature and humidity ranges.

Temperature range: 5° ~ 35°C (41° ~ 95°F).

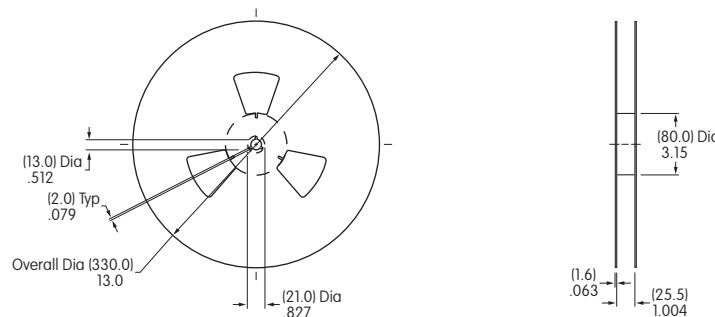
Relative humidity range: 45 ~ 85%.



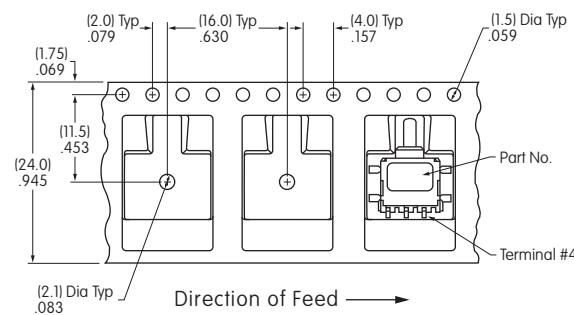
Tape-Reel Packaging for Right Angle Mount

Each tape-reel of 550 pockets contains 500 switches.

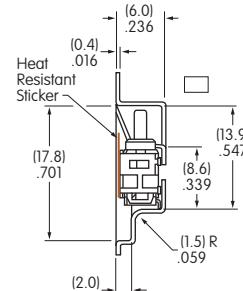
Minimum Leader Length: 15.75" (400mm) Minimum Trailer Length: 6.299" (160mm)



Reel Dimensions



Tape Dimensions



Target Applications

PLC Board

Gaming

Avionic System

Medical

Wearable Device

Sensor Module

Military Equipment

Kitchen Equipment